

forming a grating part having a periodic refractive index distribution by irradiating an optical fiber along the longitudinal direction by ultraviolet light at a predetermined period and carrying out dehydrogenation when necessary;

carrying out at least once uniform ultraviolet irradiation processing that irradiates the grating part as a whole at a predetermined temperature and time;

carrying out at least once heat trimming processing that uniformly heats the grating part as a whole at a predetermined temperature and time; and

carrying out heat aging process that heats the grating part to a uniform temperature for a predetermined period in order to stabilize the optical properties of the grating part.

2. (Amended) A manufacturing method for an optical fiber grating according to claim 1 wherein, before or after said uniform ultraviolet irradiation processing, heat trimming processing is carried out at least once by uniformly heating the grating part as a whole in order to adjust the optical properties.

3. (Amended) A manufacturing method for an optical fiber grating according to claim 1, wherein said uniform ultraviolet irradiation processing and said heat trimming processing are repeatedly carried out an arbitrary number of times and in an arbitrary sequence until predetermined optical properties of the optical fiber grating are obtained.

4. (Amended) A manufacturing method for an optical fiber grating according to claim 1, wherein said uniform ultraviolet irradiation processing and said heat trimming processing are optionally carried out while monitoring the transmitted light, and/or the reflected light of the optical fiber grating, and the reference light.